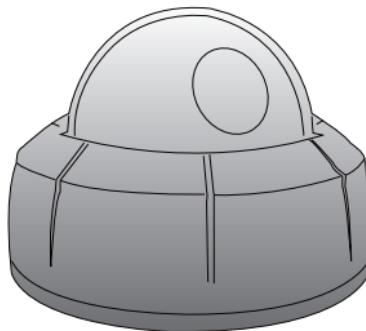


700TVL WDR•3D DNR CAMERA

700TVL SUPER WDR/3D DNR STANDARD CAMERA USER'S MANUAL VD-70DNL2812D



- 1/3" 960H IT CCD
- High Resolution 700TV Lines
- WDR(Wide Dynamic Range)
- 3D DNR(Digital Noise Reduction)
- Sens-Up Function(x512)
- Eclipse Function
- Zero Defect
- Day & Night (ICR-Optional)
- Motion Detection
- Back Light Compensation
- RS485 / PELCO-D
- Privacy Mask(Polygonal,8 Colors)
- O.S.D menu function

960H/ES 004

Precaution

	Do not Keep the camera face to strong light directly
	Do not install the camera in extreme temperature conditions.
	Do not disassemble the camera even if troubles happened
	To avoid malfunctions, never use the camera close to a gas or oil leak
	Do not drop the camera or subject them to physical shocks.
	Do not expose the camera to rain or spill beverage on it.
	Do not install the camera under unstable lighting conditions
	Do not install or use the camera in an environment where the humidity is high

1. Features

WDR(Wide Dynamic Range)

Delivers a powerful Wide Dynamic Range to the camera which provides superior images, internally and externally, even under extreme light and dark contracts. It automatically compensates the necessary light levels to get detailed information in the dark part of the image without saturation from the bright part. It enables the WDR function to be very efficient, using a normal CCD, by using a Dual Shutter (long & short shutter) algorithm, a specialised AE (Auto Exposure) and intelligent image processing.

700 TVL ULTRA HIGH RESOLUTION

The horizontal resolution of 700 TV Lines with 1/3"960H IT CCD. It gives a vivid image output with super high horizontal resolution using our own De-Mosaic Interpolation algorithm and a specialised built-in sharpness filter.

3D DNR(Digital Noise Reduction)

Achieves excellent 3D-DNR (3-Dimensional Digital Noise Reduction) function using upgraded 3D filtering. This function is automatically enabled when the camera is being used and provides clear and superior images in very low light luminance. Normally video noise increases in low light conditions, while the gain level of the amplifier increases. It compensates for the dynamic noise using the inactive information of a normal frame

ZERO DEFECT

Adaptive Defect Correction delivers clear picture capture in very low light luminance using two algorithms for defect pixel compensation.

Sens-Up(x512, DSS)

Achieves high quality pictures by supporting a long exposure time - more than 1/50second - and enables recognition of the shape and color of a suspended object under no light conditions - in cases where exposure time is greater than 8 seconds (x512).

POLYGONAL PRIVACY MASKING(Polygonal, 8colors)

Ensures privacy protection for private and specific areas on the video signal output using a polygonal masking function. It allows the size and position of the masking areas to be controlled very easily, and there are 8 mask areas which are user programmable - color, brightness and mosaic.

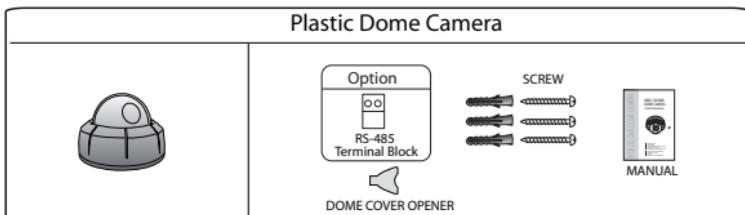
ECLIPSE

Enables the recognition of a visible car license plate by blocking unwanted light sources.

HIGH SENSITIVITY TRUE DAY&NIGHT

The Day & Night function delivers high quality color rendition and converts automatically into monochrome as luminance levels drop.

2. Components



Plastic Dome Camera

A Type(OSD Board)



① Base

② Dome Cover Ring

③ Dome

④ Focus Handle

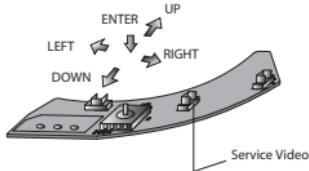
Used to provide for accurate of an object within the lens field of view

⑤ Zoom Handle

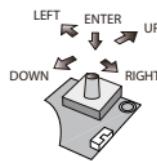
Used to adjust zoom magnification by turning

⑥ OSD Board

A Type(OSD Board)



B Type(OSD Board)



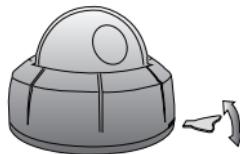
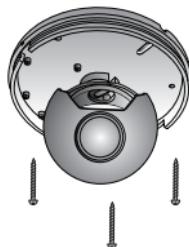
C Type(OSD Board)



Used to connect it with external viewer as follows.

4. Installation & Connection

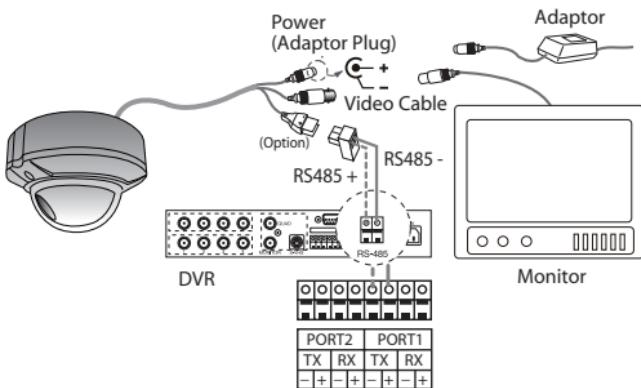
Plastic Dome Camera
Wall



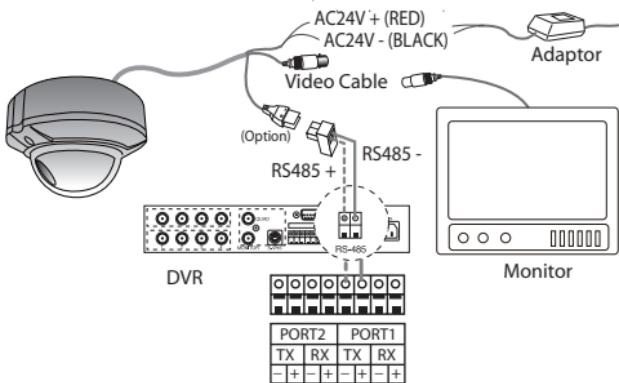
Note :

- * Rubber pad(gasket) should be stucked to above base in installation place.
- * Wall mounting bracket and other instruments should be used with dome camera if the installation condition is not appropriate to cover the whole dome base.

DC Power Connecting

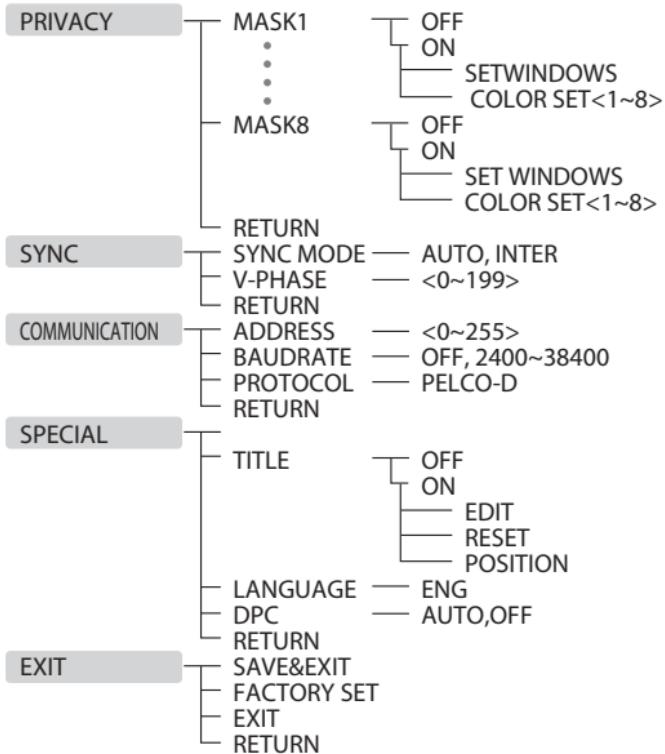


AC Power Connecting



5. Setup Menu Flow

EXPOSURE	LENS	— DC, ELC
	E.SHUTTER	— AUTO, 1/50,1/60(NTSC), 1/100,000
	BLC	— ON<1~255>, OFF
	WDR	— OFF — ON — WDR LEVEL<0~20> — WEIGHT<0~20>
	AGC	— OFF,LOW,MID,HIGH
	SENS-UP	— AUTO, OFF, MANUAL (x512 ~ x2)
	RETURN	
COLOR	WB MODE	— AWC, ATW, MANUAL, PUSH
	R-Y GAIN	
	B-Y GAIN	
	RETURN	
DAY&NIGHT	D&N MODE	— AUTO, DAY, NIGHT, EXT
	LEAD TIME	— <1, 5, 30, 60>
	BURST	— ON, OFF
	RETURN	
FUNCTION	MIRROR	— ON, OFF
	SHARPNESS	— <0~40>
	GAMMA	— 0.45, 0.6, 1.0
	NEGA	— OFF, ON
	3D DNR	— OFF, LOW, MID, HIGH
	ECLIPSE	— OFF — ON — SET LEVEL-LOW/MIDDLE/HIGH — HI-INV -ON/OFF
	RETURN	
MOTION	ALARM	— OFF, ON
	SET WINDOWS	
	ALL SET	
	ALL CLEAR	
	SENSITIV	
	SHOW	— OFF, ICON, TRACE
	DELAY TIME	— <1~15>
	RETURN	



6. Special Features

1. WDR(Wide Dynamic Range)

Wide Dynamic Range is essential for capturing the images at all light levels.

EXPOSURE	
LENS	DC↓
E.SHUTTER	1/60
BLC	ON
► WDR	ON↓
AGC	HIGH
SENS-UP	MANUAL
RETURN	

► WDR	
WDR LEVEL	11
WEIGHT	10
RETURN	

1) WDR LEVEL :

You can set the WDR(Entry) LEVEL on the entry timing for this function. You have to set the level into low number if you need a WDR function just in more strong light.

On the contrary you have to set the level into high number if you need a WDR function just in normal conditions(or low light) without strong lights as like sunshine.

WDR Entry Level (Day Time) (0~20)	0	2	4	6	8	10	12	14	16	18	20
											
	Strong Sunshine Light (Day Time)				Middle Light (Day Time)				Low Light (Day Time)		
	* Eclipse mode should be Off while you use WDR function. (Eclipse is just a special WDR function for car license plate)										

2) WEIGHT : This is a level to make the dark area more bright.

Low number for more dark condition and high number for more brightness condition.

2. 3D DNR(Digital Noise Reduction)

Select 3D DNR ON or OFF.

3D-DNR function reduce the background noise in a low luminance environment. Upgraded 3D filtering ensures even more clear image.

[DNR Level High : Picture image is more clear but Ghost is more increased.

DNR Level Low : Picture image is not clear but less Ghost.]

MAIN MENU

EXPOSURE
COLOR
DAY & NIGHT
► FUNCTION
MOTION
PRIVACY MASK
SYNC
COMMUNICATION
SPECIAL
EXIT

FUNCTION

MIRROR	ON/OFF
SHARPNESS	<0~40>
GAMMA	0.45
NEGA	ON/OFF
► 3D DNR	MIDDLE
ECLIPSE	OFF
RETURN	

3. ECLIPSE

If there is a highlight within a limited environment such as car park, It makes it possible to review vehicle license plates by removing the highlight.

[Only used for car license plate in low light condition and the WDR in OSD menu should be Off mode while Eclipse work as On mode]

MAIN MENU

EXPOSURE
COLOR
DAY & NIGHT
► FUNCTION
MOTION
PRIVACY MASK
SYNC
COMMUNICATION
SPECIAL
EXIT

FUNCTION

MIRROR	ON/OFF
SHARPNESS	<0~40>
GAMMA	0.45
NEGA	ON/OFF
3D DNR	MIDDLE
► ECLIPSE	OFF
RETURN	

7. SPECIFICATIONS

TV System		NTSC	PAL
Sensor		1/3" 960H IT CCD	
Total Pixel		1020(H) X 508(V)	1020(H) X 596(V)
Effective Pixel		976(H) X 494(V)	976(H) X 582(V)
Synchronization	Internal	H/V 15.734/59.94Hz	H/V 15.625/50Hz
	Line Lock	H/V 15.750/60Hz	H/V 15.625/50Hz
Scanning System		2:1 Interlace	
Horizontal Resolution		700 TV Lines (Max.)	
Min. Illumination	Sens-Up Off	0.12Lux(15IRE), 0.2Lux(30IRE), 0.4Lux(50IRE) F1.2	
	Sens-Up On	0.0002Lux(15IRE), 0.0005Lux(30IRE), 0.0008Lux(50IRE) F1.2	
Video Output		1.0Vp-p/ 75ohm Video 0.714Vp-p	
γ Correction		0.45, 0.6, 1.0	
S/N		More than 52dB(AGC off)	
O.S.D		LENS,E-SHUTTER, BACKLIGHT,WDR, AGC, SENS-UP WHITE-BALANCE, DAY&NIGHT, MOTION, MIRROR SHARPNESS, GAMMA, DNR, ECLIPSE, PRIVACY COMMUNICATION, SYNC, TITLE, LANGUAGE DPC	
Electrical Shutter		1/60~1/100,000	1/50~1/100,000
Privacy Masking		8 Windows(Polygonal, 8 Colors)	
Day & Night		COLOR / BW / AUTO / EXT	
Motion Detection		ON / OFF	
Sens-Up(Low Shutter)		OFF ~x512	
SYNC		AUTO / INTERNAL / DIGITAL LINE LOCK	
White Balance		ATW / AWC / MANUAL / PUSH	
WDR		ON / OFF(WDR LEVEL, WEIGHT)	
WDR Level		120dB Max.	
3D-DNR		ON / OFF(OFF, LOW, MID, HIGH)	
MIRROR		ON / OFF	
NEGA		ON / OFF	
ECLIPSE		ON / OFF	
AGC		LOW / MIDDLE / HIGH / OFF	
			
LENS		Asperical 2.8~12mm DC Auto Iris	
Operating Temperature/Humidity		-20°C ~60°C /30% ~80%	
Storage Temperature/Humidity		-30°C ~60°C /20% ~90%	
Supply Voltage		Dual AC24V / DC 12V	
Current		110mA / 250mA	

Design and specifications are subject to change without notice.

PRODUCT WARRANTY CARD

1) ITEM # :
2) S/N # :
3) INSTALLATION CONDITION - Indoor <input type="checkbox"/> / Outdoor <input type="checkbox"/> - Power supply SPECIFICATION : DC12V <input type="checkbox"/> / AC24V <input type="checkbox"/> CURRENT _____ mA
4) TROUBLESHOOTING - No picture <input type="checkbox"/> - Bad image <input type="checkbox"/> - No power <input type="checkbox"/> - Water damage <input type="checkbox"/> - LED ON <input type="checkbox"/> / OFF <input type="checkbox"/> - ETC. : <input type="checkbox"/>
<p>* Please keep this warranty card with the manual. * Please fill out this warranty card and send us this warranty card with the faulty units together.</p>

- Following cases can be charged even within the warranty period.
 - a. When defects are caused by user's carelessness.
 - b. When improper or unauthorized repairs are done or when the inside is modified or damaged.
 - c. Defects caused by natural disaster or power problem.
 - d. When the warranty card is not filled out or corrected unconfirmed.